What is Claimed is:

1. A fusion protein consisting essentially of:
   a) a biotinylation-competent protein or peptide;
   b) a polypeptide of interest;
   and wherein said biotinylation-competent protein or peptide is joined directly to the N- or C-terminal end of said polypeptide of interest.

2. The fusion protein of claim 1, wherein said biotinylation-competent protein or peptide is selected from the group consisting of: pyruvate carboxylase; propionyl-CoA carboxylase; acetyl CoA carboxylase; methylcrotonyl-CoA carboxylase; and a PSTCD peptide wherein said PSTCD peptide consists of either the full length PSTCD domain as shown in SEQ ID NO:1 or a portion of the PSTCD domain which: (a) includes lysine 89; (b) is at least 63 amino acids in length; and (c) undergoes biotinylation when expressed in a host cell.

3. The fusion protein of claim 2, wherein said biotinylation-competent protein or peptide is a PSTCD peptide consisting of either the full length PSTCD domain as shown in SEQ ID NO:1 or a portion of the PSTCD domain which: (a) includes lysine 89; (b) is at least 63 amino acids in length; and (c) undergoes biotinylation when expressed in a host cell.

4. The fusion protein of claim 3, wherein said biotinylation-competent PSTCD peptide is 70 amino acids in length and has a sequence corresponding to that of SEQ ID NO:2.

5. A polynucleotide vector for expressing protein comprising:
   a) a coding region consisting of nucleotides encoding the fusion protein of claim 1; and
   b) a promoter active in mammalian cells and operably linked to said coding region.

6. A method for biotinylating a polypeptide of interest, comprising expressing the vector of claim 5 in a mammalian host cell *in vivo* or *in vitro*.

7. The method of claim 5, wherein said cell is a CHO cell in culture.

8. The fusion protein of claim 1, wherein said polypeptide of interest is a viral surface protein.

9. The fusion protein of claim 8, wherein said viral surface protein is the fiber protein of adenovirus and said biotinylation-competent protein or peptide is a PSTCD peptide is 70 amino acids in length and having a sequence corresponding to that of SEQ ID NO:2.

10. A polynucleotide vector for expressing protein comprising:

a) a coding region consisting of nucleotides encoding the fusion protein of claim 8; and

b) a promoter active in mammalian cells and operably linked to said coding region.

11. A method for biotin-labeling a virus, comprising replicating said virus in a mammalian host cell, wherein said host cell expresses a biotin ligase and has been engineered to express the vector of claim 10.

12. The method of claim 11, wherein said virus is a non-enveloped virus.

13. The method of claim 12, wherein said non-enveloped virus is an adenovirus.

14. The method of claim 11, wherein said host cell has been engineered to express BirA.

15. The fusion protein of claim 1, further comprising a leader sequence that promotes the secretion of said fusion protein from a mammalian host cell.

16. The fusion protein of claim 15, wherein said biotinylation-competent protein or peptide is joined directly to the C-terminal end of a polypeptide with a leader sequence, wherein said leader sequence promotes secretion from a mammalian host cell.

17. The fusion protein of claim 15, wherein said biotinylation-competent protein or peptide is a PSTCD peptide is 70 amino acids in length and having a sequence corresponding to that of SEQ ID NO:2.

18. A polynucleotide vector for expressing protein, comprising:
    a) a coding region consisting of nucleotides encoding the fusion protein of claim 15; and
    b) a promoter active in mammalian cells and operably linked to said coding region.

19. A method for biotinylating a polypeptide secreted by a mammalian host cell, comprising expressing the vector of claim 18 in said host cell, wherein said host cell has been engineered to express a distinct fusion protein consisting of a biotin ligase directly linked to a leader sequence that promotes secretion from said host cell.

20. The method of claim 19, wherein said biotin ligase is BirA.

21. The method of claim 20, wherein said host cell is a CHO cell and said leader sequence linked to BirA is the lgκ secretory leader.

22. A fusion protein consisting essentially of a biotin acceptor peptide (BAP) joined directly to the N- or C-terminal end of a polypeptide of interest.

23. The fusion protein of claim 22, wherein said biotin acceptor protein has the sequence of SEQ ID NO:3.

24. A polynucleotide vector for expressing protein, comprising:
    a) a coding region consisting of nucleotides encoding the fusion protein of claim 22; and
    b) a promoter active in mammalian cells and operably linked to said coding region.

25. A method for biotinylating a polypeptide of interest *in vivo* or *in vitro*, comprising expressing the vector of claim 22 in a mammalian host cell, wherein said host cell has been engineered to express a biotin ligase.

26. The method of claim 25, wherein said biotin ligase is BirA.

27. The fusion protein of claim 22, wherein said biotin acceptor protein is joined directly to the VSV-G protein.

28. The fusion protein of claim 27, wherein said biotin acceptor peptide has the sequence of SEQ ID NO:3.

29. A polynucleotide vector for expressing protein, comprising:

a) a coding region consisting of nucleotides encoding the fusion protein of claim 27; and

b) a promoter active in mammalian cells and operably linked to said coding region.

30. A method of biotin-labeling a virus, comprising: replicating said virus in a mammalian host cell, wherein said mammalian host expresses a biotin ligase and has been engineered to express the vector of claim 29.

31. The method of claim 30, wherein said virus is an enveloped virus.

32. The method of claim 31, wherein said enveloped virus is a retrovirus.

33. The method of claim 32, wherein said host cell has been engineered to express BirA.

34. A method of targeting a protein of interest to a cell in culture or in the body of a subject, comprising:

a) binding avidin to the surface of said cell;

b) biotinylating the fusion protein of claim 1, wherein said protein of interest protein of interest is joined to a biotinylation-competent protein or peptide;

c) administering the biotinylated protein of step c) to either to the medium surrounding said cell in culture or to said subject.

35. The method of claim 34, wherein said avidin is bound to the surface of said cell by a process comprising:

a) attaching avidin to a ligand that binds to a receptor located on the surface of said cell;

b) administering the avidin/ligand molecule of step a) either to the medium surrounding said cell in culture or to said subject.

36. The method of either claim 34 or claim 35, wherein said protein of interest is on the surface of a virus and is used to target said virus to said cell.